

Optical Lens Adapter



Installation Manual For TLD and CineVERSUM Cinema lenses

R9832650

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1. OPTICAL LENS ADAPTER

1.1 Kit Contents

Contents of the Optical Lens Adapter Kit

The Kit contains the following parts:

- Optical Lens adapter R9832650
- Allen Hex key 0.9mm (W382114)
- Installation manual R5976641

1.2 Use of the Optical Lens Adapter

On which lens the optical adapter can be fitted.

The optical lens adapter fits on the following lenses:

- TLD (0.8:1) R9840900
- TLD (1.6–2.0):1 R9840670
- TLD (2.0–2.8):1 R9840680
- TLD (2.8–5.0):1 R9840690
- TLD (5.0–8.0):1 R9840910
- TLD HB(0.8:1) R9842040
- TLD HB(1.6–2.0):1 R9842060
- TLD HB(2.0–2.8):1 R9842080
- TLD HB(2.8–5.0):1 R9842100
- TLD HB(5.0–8.0):1 R9842120
- CineVERSUM Cinema (1.6–2.0):1 R9642060
- CineVERSUM Cinema (2.0–2.8):1 R9642080
- CineVERSUM Cinema (2.8–5.0):1 R9642100
- CineVERSUM Cinema (5.0–8.0):1 R9642120



The mounting instructions of the optical lens adapter onto the TLD lens (0.8:1) is different compared to the other zoom lenses.



Wrong position of the optical lens adapter onto the rear of the lens can hinder lens insertion in lens block. Read carefully the mounting instructions.

2. MOUNTING THE OPTICAL LENS ADAPTER

Overview

- TLD (0.8:1) Lens and TLD HB(0.8:1) Lens
- TLD Zoom Lenses and CineVERSUM Cinema zoom Lenses

2.1 TLD (0.8:1) Lens and TLD HB(0.8:1) Lens

Necessary tools

Allen hex key 0.9mm (added to the kit)

How to Mount The Optical Lens Adapter

1. Carefully unpack the optical lens adapter. Avoid touching the lens itself (fingerprints).
2. Fully slide the lens adapter onto the end of the lens. (image 2-1)
3. Rotate the adapter for lining up an adapter fixation screw with the middle of the lens holder plate (A), as illustrated in picture below. (image 2-2)
4. Secure the position of the adapter by tightening the 4 screws (B). (image 2-3)



Image 2-1
Lens adapter insertion



Image 2-2
Lens adapter lining up

2. Mounting the Optical Lens Adapter



Image 2-3
Lens adapter securing

2.2 TLD Zoom Lenses and CineVERSUM Cinema zoom Lenses

Necessary tools

Small flat (0.5 mm) screwdriver

How to Mount The Optical Lens Adapter

1. Carefully unpack the optical lens adapter. Avoid touching the lens itself (fingerprints).
2. Fully slide the lens adapter onto the end of the lens. (image 2-4)
3. Rotate the adapter for lining up an adapter fixation screw with the middle of the lens holder plate (A), as illustrated in picture below. (image 2-5)
4. Secure the position of the adapter by tightening the 3 screws (B). (image 2-6)



Image 2-4
Lens adapter insertion



Image 2-5
Lens adapter lining up



Image 2-6
Lens adapter securing

3. LENS REMOVAL AND INSTALLATION

Overview

- Lens Removal
- Lens Installation

3.1 Lens Removal

Necessary tools

No tools.



CAUTION: Risk of personal injury and lens damage. Pay attention to lens support while removing or installing the lens.

How to remove the installed lens

1. Support the lens with one hand.
2. Fully move the handle (A) of the lens anchor system counter clockwise (unlocked).
3. Remove the lens unit. (image 3-1)

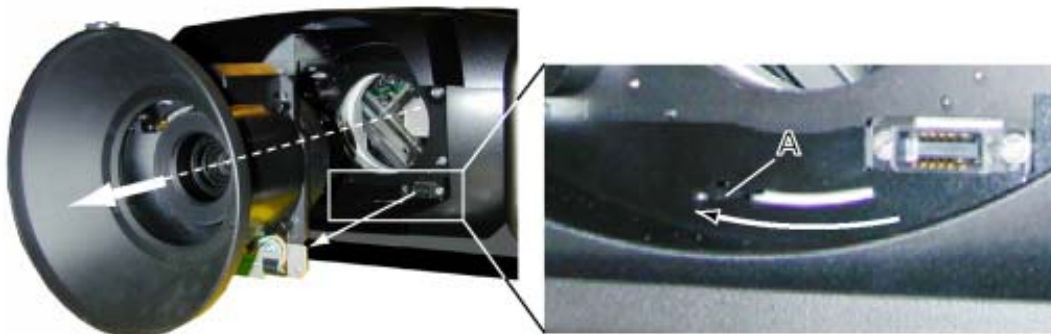


Image 3-1
Lens removal

3.2 Lens Installation

How to install the new lens

1. Fully move the lens handle clockwise (lock position).
2. Insert the lens unit into the lens holder lining up the motor connector with the its socket (B) until it fits.
3. Push the lens unit in the lens holder until it fits (a click is audible when the lens locks). (image 3-2)

3. Lens Removal and Installation

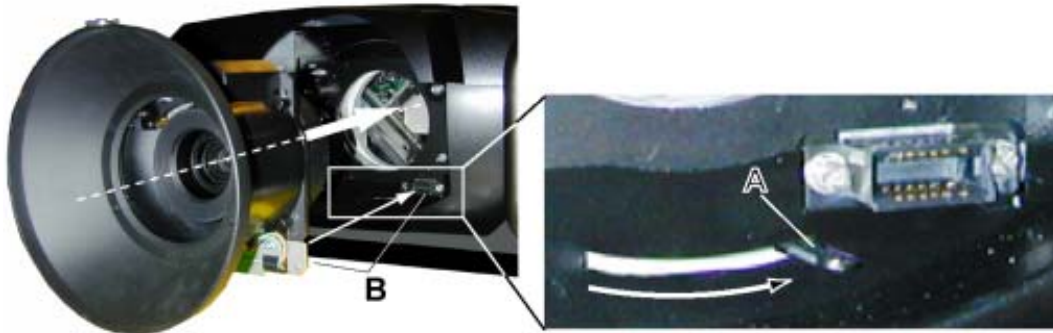


Image 3-2
Lens installation



CAUTION: For a table mounted projector, block the projector while inserting the lens unit to avoid the projector from sliding off from the table.

4. LENS FORMULAS

4.1 Projector Distance Calculation

Diagram

The following diagrams explain the position of the projector with respect to the screen and how to determine the projector distance PD.

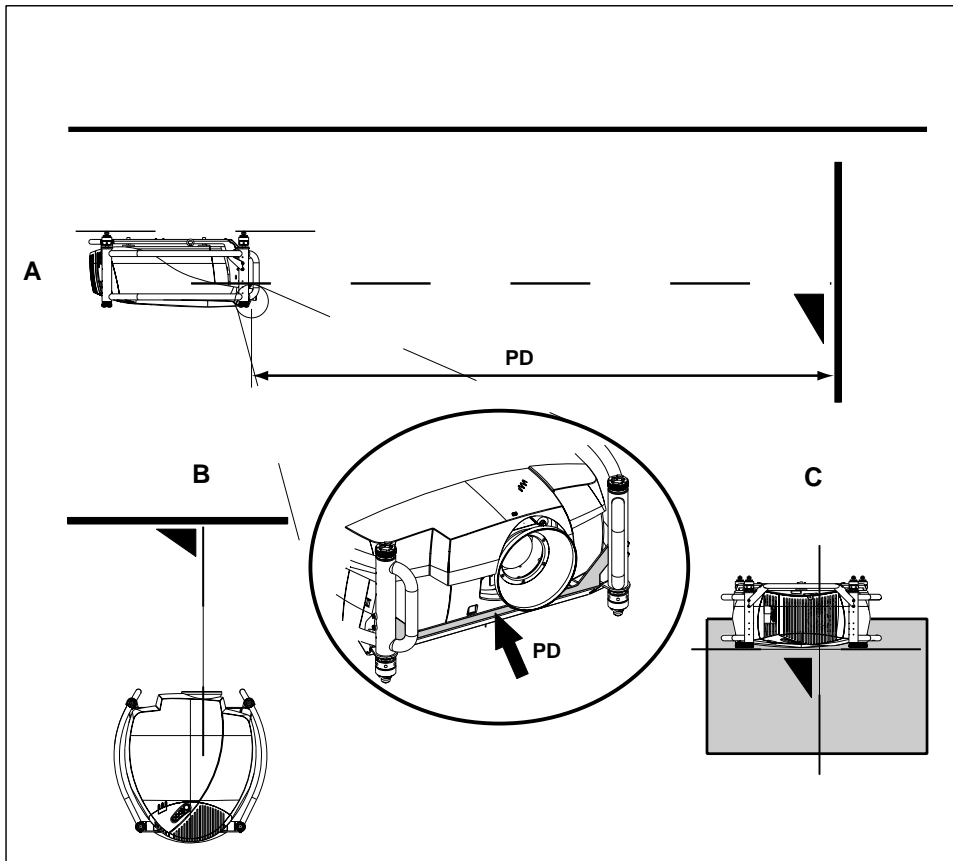


Image 4-1
PD calculation Front/Ceiling configuration

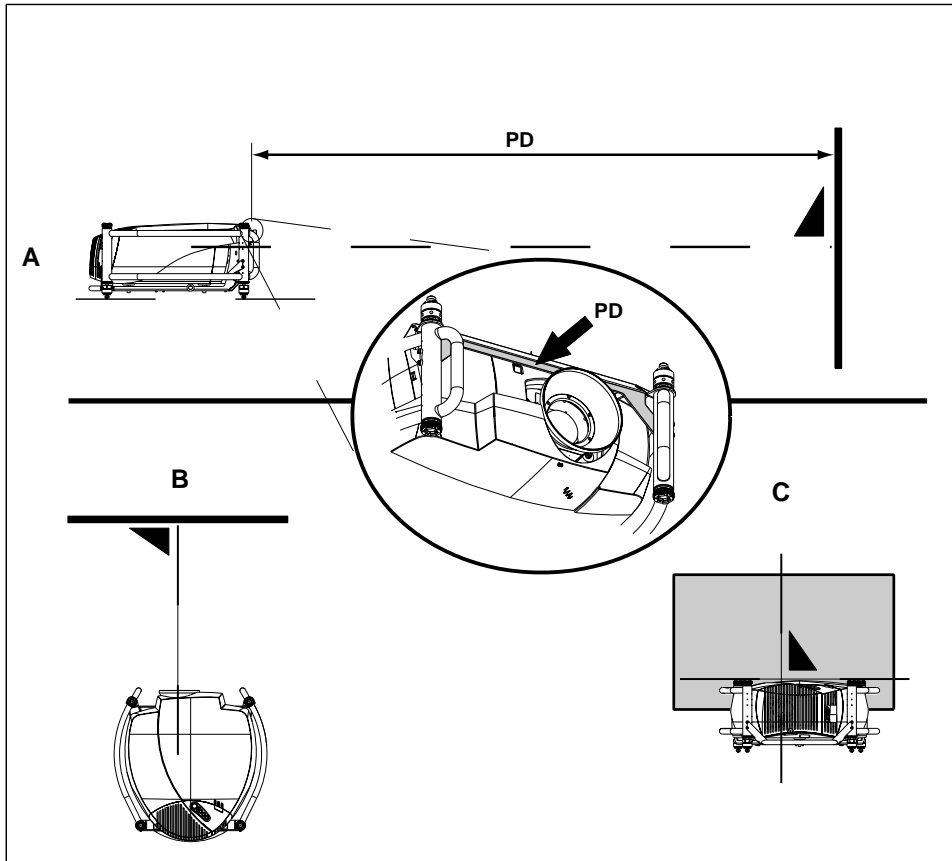


Image 4-2
PD calculation Front/Table configuration

4.2 Lens Formulas

Lens Formulas for the different lenses with optical adapter

Lens formulas in the decimal system (PD and SW in meters)

TLD (0.8:1)		
	PD=1.06 x SW + 0.09	
TLD HB(0.8:1)		
	PD=1.06 x SW + 0.09	
TLD (1.6-2.0):1		
	TLD (1.6-2.0):1 Wide	PD=2.01 x SW - 0.05
	TLD (1.6-2.0):1 Tele	PD=2.53 x SW - 0.09
TLD HB(1.6-2.0):1		
	TLD (1.6-2.0):1 Wide	PD=2.01 x SW - 0.05
	TLD (1.6-2.0):1 Tele	PD=2.53 x SW - 0.09

TLD (2.0-2.8):1		
	TLD (2.0-2.8):1 Wide	PD=2.52 x SW - 0.13
	TLD (2.0-2.8):1 Tele	PD=3.58 x SW - 0.20
TLD HB(2.0-2.8):1		
	TLD (2.0-2.8):1 Wide	PD=2.52 x SW - 0.13
	TLD (2.0-2.8):1 Tele	PD=3.58 x SW - 0.20
TLD (2.8-5.0):1		
	TLD (2.8-5.0):1 Wide	PD=3.53 x SW - 0.12
	TLD (2.8-5.0):1 Tele	PD=6.43 x SW - 0.33
TLD HB(2.8-5.0):1		
	TLD (2.8-5.0):1 Wide	PD=3.53 x SW - 0.12
	TLD (2.8-5.0):1 Tele	PD=6.43 x SW - 0.33
TLD (5.0-8.0):1		
	TLD (5.0-8.0):1 Wide	PD=6.18 x SW +0.03
	TLD (5.0-8.0):1 Tele	PD=10.29 x SW - 0.24
TLD HB(5.0-8.0):1		
	TLD (5.0-8.0):1 Wide	PD=6.18 x SW +0.03
	TLD (5.0-8.0):1 Tele	PD=10.29 x SW - 0.24
CineVERSUM Cinema (1.6-2.0):1		
	CineVERSUM Cinema (1.6-2.0):1 Wide	PD=1.62 x SW - 0.07
	CineVERSUM Cinema (1.6-2.0):1 Tele	PD=2.03 x SW - 0.11
CineVERSUM Cinema (2.0-2.8):1		
	CineVERSUM Cinema (2.0-2.8):1 Wide	PD=2.03 x SW - 0.15
	CineVERSUM Cinema (2.0-2.8):1 Tele	PD=2.88 x SW - 0.22
CineVERSUM Cinema (2.8-5.0):1		
	CineVERSUM Cinema (2.8-5.0):1 Wide	PD=2.84 x SW - 0.14
	CineVERSUM Cinema (2.8-5.0):1 Tele	PD=5.18 x SW - 0.36
CineVERSUM Cinema (5.0-8.0):1		
	CineVERSUM Cinema (5.0-8.0):1 Wide	PD=4.97 x SW - 0.01
	CineVERSUM Cinema (5.0-8.0):1 Tele	PD=8.28 x SW - 0.270.016*39.37

Lens Formulas for the different lenses with optical adapter

Lens formulas in the inch system (PD and SW in inches)

4. Lens Formulas

TLD (0.8:1)		
	PD=1.06 x SW + 3.54	
TLD HB(0.8:1)		
	PD=1.06 x SW + 3.54	
TLD (1.6-2.0):1		
	TLD (1.6-2.0):1 Wide	PD=2.01 x SW - 1.97
	TLD (1.6-2.0):1 Tele	PD=2.53 x SW - 3.54
TLD HB(1.6-2.0):1		
	TLD (1.6-2.0):1 Wide	PD=2.01 x SW - 1.97
	TLD (1.6-2.0):1 Tele	PD=2.53 x SW - 3.54
TLD (2.0-2.8):1		
	TLD (2.0-2.8):1 Wide	PD=2.52 x SW - 5.12
	TLD (2.0-2.8):1 Tele	PD=3.58 x SW - 7.87
TLD HB(2.0-2.8):1		
	TLD (2.0-2.8):1 Wide	PD=2.52 x SW - 5.12
	TLD (2.0-2.8):1 Tele	PD=3.58 x SW - 7.87
TLD (2.8-5.0):1		
	TLD (2.8-5.0):1 Wide	PD=3.53 x SW - 4.72
	TLD (2.8-5.0):1 Tele	PD=6.43 x SW - 12.99
TLD HB(2.8-5.0):1		
	TLD (2.8-5.0):1 Wide	PD=3.53 x SW - 4.72
	TLD (2.8-5.0):1 Tele	PD=6.43 x SW - 12.99
TLD (5.0-8.0):1		
	TLD (5.0-8.0):1 Wide	PD=6.18 x SW + 1.18
	TLD (5.0-8.0):1 Tele	PD=10.29 x SW - 9.45
TLD HB(5.0-8.0):1		
	TLD (5.0-8.0):1 Wide	PD=6.18 x SW + 1.18
	TLD (5.0-8.0):1 Tele	PD=10.29 x SW - 9.45
CineVERSUM Cinema (1.6-2.0):1		
	CineVERSUM Cinema (1.6-2.0):1 Wide	PD=1.62 x SW - 2.91
	CineVERSUM Cinema (1.6-2.0):1 Tele	PD=2.03 x SW - 4.49

CineVERSUM Cinema (2.0-2.8):1		
	CineVERSUM Cinema (2.0-2.8):1 Wide	PD=2.03 x SW - 6.06
	CineVERSUM Cinema (2.0-2.8):1 Tele	PD=2.88 x SW - 8.82
CineVERSUM Cinema (2.8-5.0):1		
	CineVERSUM Cinema (2.8-5.0):1 Wide	PD=2.84 x SW - 5.57
	CineVERSUM Cinema (2.8-5.0):1 Tele	PD=5.18 x SW - 14.33
CineVERSUM Cinema (5.0-8.0):1		
	CineVERSUM Cinema (5.0-8.0):1 Wide	PD=4.97 x SW + 0.24
	CineVERSUM Cinema (5.0-8.0):1 Tele	PD=8.28 x SW - 10.79

5. LENS ADJUSTMENT

Lens adjustment features:

The lens adjustment menu contains the following items:

- Zoom/Focus adjustment of the lens
- Vertical and Horizontal shift of the image.
- Activation of a specific test pattern for lens adjustment.



Lens adjustment via Control Buttons on projector only possible for RLM series.

Overview

- Lens Adjustment via Control Buttons on Projector
- Lens Adjustment via Menu Bar
- Direct Lens Adjustment (RCU)


5.1 Lens Adjustment via Control Buttons on Projector


How to enter the adjustment menu.

1. Press the control button  (C).

The lens adjustment menu appears on the screen, requesting for ZOOM/FOCUS alignment.

2. Press button  (B) to toggle between ZOOM/FOCUS and Vert. Hor. SHIFT menu.

Note: For the alignment, a lens adjustment test pattern can be activated: toggle control button  (C) to activate or deactivate the lens adjustment test pattern.

3. Press the corresponding arrows (A1) or (A2) on the adjust button, as indicated in front of the menu items, for alignment.
4. Press control button  (D) to leave the lens adjustment menu. (image 5-1)

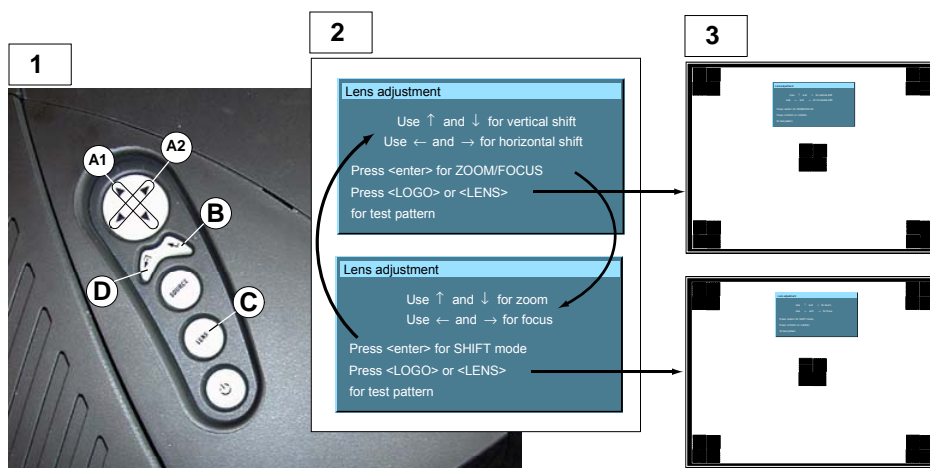


Image 5-1
Lens Adjustment

- 1 Button panel on projector
- 2 Menu Zoom/Focus and Vertical & Horizontal shift
- 3 Same menu inserted in lens adjustment test pattern

5.2 Lens Adjustment via Menu Bar

How to enter the adjustment menu.

1. Press the **MENU** button (A) on the Remote Control.
The menu bar (1) appears on top of the image. (image 5-2)
2. Press → (A1) on adjust button to select menu item *Installation*.
A text box appears with the first item *Lens adjustment* selected (reversed text)
3. Press **ENTER** button (B) to activate the lens adjustment menu (2).
The lens adjustment menu appears on the screen, requesting for ZOOM/FOCUS alignment.
4. Press **ENTER** button (B) to toggle between ZOOM/FOCUS and Vert. Hor. SHIFT menu (2).
Note: For the alignment, a lens adjustment test pattern can be activated: toggle button (C) to activate or deactivate the lens adjustment test pattern (3).
5. Press the corresponding arrows (A1) or (A2) on the adjust button, as indicated in front of the menu items, for alignment.
6. Press control button (D) to leave the lens adjustment menu.

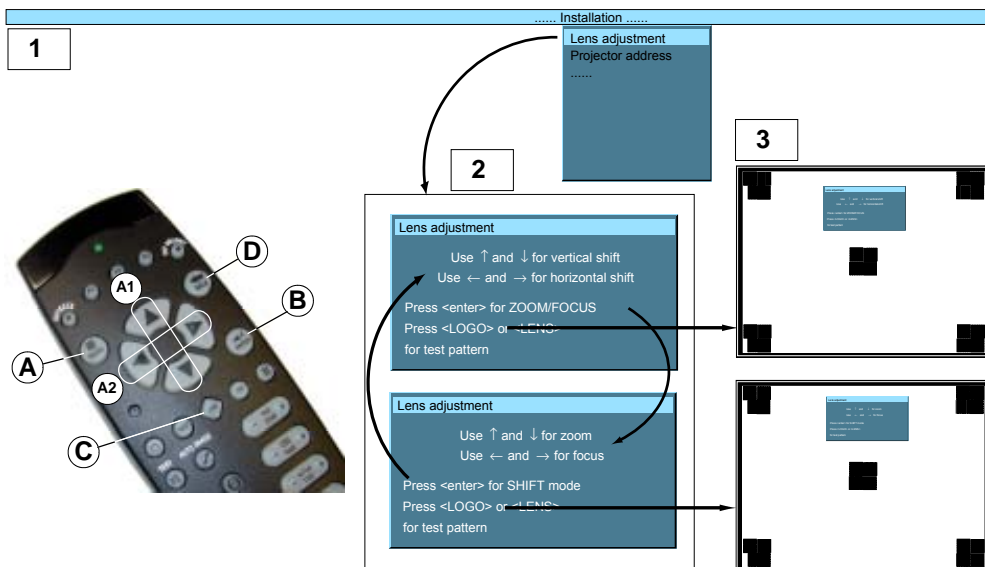


Image 5-2
Lens adjustment via menu

5.3 Direct Lens Adjustment (RCU)

Lens adjustment button on the Remote Control

On the Remote Control three buttons with double action are provided, allowing direct alignment for lens ZOOM, FOCUS and VERTICAL SHIFT (For Horizontal Shift, see the first two procedures).

1. Press **LENS ZOOM** button [-] or [+] (A) for correct image size on the screen.
2. Press **LENS FOCUS** button [-] or [+] (C) for an overall focus of the image.
3. Press **LENS SHIFT** button ↑ or ↓ (B) for correct vertical position of the image on the screen. (image 5-3)

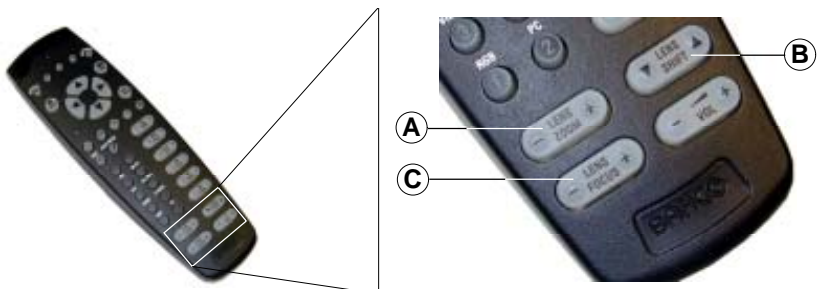


Image 5-3
Lens adjustment with RCU

6. LENS CLEANING

6.1 Cleaning the lens



To minimize the possibility of damaging the optical coating or scratching exposed lens surface, we have developed recommendations for cleaning the lens. **FIRST**, we recommend you try to remove any material from the lens by blowing it off with clean, dry deionized air. **DO NOT** use any liquid to clean the lenses.

Necessary tools

Toraysee™ cloth (delivered together with the lens kit). Order number : R379058.

How to clean the lens ?

Proceed as follow :

1. Always wipe lenses with a CLEAN Toraysee™ cloth.
 2. Always wipe lenses in a single direction.
Warning: *Do not wipe back and forwards across the lens surface as this tends to grind dirt into the coating.*
 3. Do not leave cleaning cloth in either an open room or lab coat pocket, as doing so can contaminate the cloth.
 4. If smears occur when cleaning lenses, replace the cloth. Smears are the first indication of a dirty cloth.
-



WARNING: Do not use fabric softener when washing the cleaning cloth or softener sheets when drying the cloth.

Do not use liquid cleaners on the cloth as doing so will contaminate the cloth.



CAUTION: Other lenses can also be cleaned safely with this Toraysee™ cloth.

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Revision Sheet

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